Teaching Nutrition through Math, Science, Language Arts and Health Enhancement

Grade Level: Second Lesson Time: 30 minutes

About Your

Integrated Core Subjects: Science, Health Enhancement

Montana Content Standard: Science 2: Students, through the inquiry process, demonstrate knowledge of properties, forms, changes & interactions of physical and chemical systems. Math 5: Students demonstrate an understanding of measurable attributes and an ability to use measurement processes.

Montana Content Standard: Health Enhancement 1 & 5: (1) Students have a basic knowledge and understanding of concepts that promote comprehensive health; (5) students demonstrate the ability to use critical thinking and decision making to enhance health.

Objectives: Students will identify that sugar is the main ingredient of sweetened beverages (pop); describe what happens when sugar is mixed with water; and list three healthy beverage choices.

Lesson/Activity

- 1. Ask the students what type of beverages do they like to drink with their meals or snacks. As a review of the Delicious Dairy lesson, ask the students to name examples of a healthy beverage, with milk being a possible answer. Have pictures of healthy beverages like low-fat milk, 100% fruit or vegetable juice, water, or fruit smoothies. Write these on the board.
- 2. Ask for some examples of unhealthy beverages. Examples include pop, Sports Drinks, Energy Drinks or fruit drinks. Ask the students what makes them unhealthy. The answer is they are high in sugar and low in nutrients. The definition of a nutrient is a chemical compound that is needed by an organism to live or grow. Nutrients are needed by our bodies in order to grow, think, breathe and move. Examples of nutrients are protein, fat, carbohydrates, water, vitamins and minerals. Ask them if they think students are drinking more healthy or unhealthy beverages today.
- Show the soda pop and ask kids what they know about it. Write their answers on the board. Answers may include high sugar, caffeine, tastes good and sweet, not healthy, causes cavities, high in calories with no nutrition, kids are drinking too much pop.
- 4. Explain to the children that pop is made by mixing sugar and water. Have three tablespoons of sugar measured out and show it to the students. This is the amount of sugar that is in one 12-ounce can of pop. Have 12 ounces of water measured out into the 16-ounce measuring cup. Ask the students to observe the sugar and the water and to write a description of each item in their health journals. Then ask them to predict what will happen when sugar is mixed with the water. Ask them to write in their health journal their prediction on what will happen when the two substances are mixed together. Then pour the sugar into the water and stir well. Ask the students to write down their observations and then discuss them as a class. Ask the students to explain why the sugar changed in the liquid. How could they tell if there was sugar in it now? The answer would be by tasting it. Ask for a student volunteer to taste it and describe to the class what it tastes like.

Materials Needed

- A copy of the MyPyramid for Kids poster
- A copy of the Think About Your Drink work sheet for each student.
- 1/2 (8 Tbs.) cup sugar
- 1 measuring tablespoon
- 16 ounce measuring cup
- Water
- 1 bowl to put sugar in
- One 12-ounce and one 20ounce container of regular soda pop